

ABSTRACT

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5 A flip chip semiconductor device having non-solder
contact terminals is assembled by securing the chip and
substrate with a rapidly thermosetting adhesive. The process
is amenable to various bump and substrate materials, and has
the advantage of simultaneously adhering the components and
of providing a void free underfill. The process makes use of
absorption of infrared energy by the chip to heat the
10 adhesive and cause it to flow prior to rapidly solidifying
from the center outwardly. The rapid assembly, using a
simple infrared exposure apparatus is compatible with reel
to reel, or other highly automated in-line processes.